

No. 6.— *Some Records and Descriptions of New Fresh-water
Mollusks from Cameroon*

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THE following descriptions and records are based upon a small collection of fresh-water mollusks received from Mr. George Schwab, a school teacher residing at Sakbayeme, about fifty miles northeast of Edia, Cameroon.

MELANIIDAE

POTADOMINAE

POTADOMA FREETHII GUINEENSIS (Reeve)

1860 *Melania guineensis* Reeve, *Conch. icon.*, **12**, *Melania*, pl. 20, fig. 142.

1927 *Potadoma freethii guineensis* (Reeve), Pilsbry and Bequaert, *Bull. Am. mus. nat. hist.*, **53** (2): p. 275.

A single specimen from the Sanaga River, near Sakbayeme, the apex badly corroded, measured: length 48, width 20, ap. length 20, ap. width 12.5 mm.

Several specimens from Kribi. First two or three whorls of the spires corroded away.

GOODRICHIA, gen. nov.

Shells imperforate, of solid structure, trochiform or conoid in general outline, possessing a radula about equal in length to the greatest diameter of the shell (*G. trochiformis*). Obtusely carinated with a very minute granulose or striated sculpture caused by interruptions in the fine spiral and incremental growth lines. Inner marginal teeth of radula with two supporting plates, one on each side, with outer plate below.

Genoholotype: *Goodrichia trochiformis*.

This genus differs from *Potadoma* by its entirely different shape and by possessing an exceedingly long radula. Proportionately the radula is approximately 35% greater. Comparative figures are:

POTADOMA PANTHERVILLENSIS SPOLIATA (D. AND P.)

Radula 8.5 mm., shell width 11 mm.

GOODRICHIA TROCHIFORMIS Clench (Holotype)

Radula 27 mm., shell width 26 mm.

Goodrichia differs from *Rhinomelania* E. v. Martens, by having the basal portion of the aperture rounded or flattened by a second carina and not produced into a well-defined canal. *Goodrichia* also differs materially in shape and in the possession of well-developed carinae. The radula of *Rhinomelania* is unknown.

GOODRICHIA TROCHIFORMIS, sp. nov.

Plate 1, figs. 3-4

Shell: imperforate, solid, broadly and obtusely carinate. Color, dark brown to dark olivaceous brown, with darker fine irregular axial streaks. Whorls angular, probably 5 or $5\frac{1}{2}$ (all specimens heavily corroded). Spire broadly tapering. Aperture obliquely quadrate. Palatal lip simple, thin. Parietal lip thinly but evenly calloused. Columella heavy, irregularly curved to slightly angulate. Sutures slightly impressed, whorls joining along inferior margin of obtuse carina. Sculpture of fine spiral striae made granulose by the interruptions of the growth lines.

Radula: exceedingly long but otherwise similar to that of *Potadoma* as figured by Pilsbry and Bequaert (1927, p. 272, fig. 45) except for an additional supporting plate on the inner marginal tooth and a single rather than a bifurcated ectocone on the lateral tooth.

Formula

$$\left(\frac{1}{2+1} + \frac{1}{2+1}\right) + \frac{1}{1+1+2} + \frac{1}{3+1+3} + \frac{1}{2+1+1} + \left(\frac{1}{1+2} + \frac{1}{1+2}\right)$$

Length of radula: 27 mm., width 1 mm. (holotype).

Measurements of Shell

Length	Width	Ap. Length	Ap. Width	
31.5	26	18	12	mm. Holotype
30.5	24	18	12.5	Paratype
29	26	18	12	"
29	25.5	20	12	"
31	24	16	10	"

Type locality: Man River, near Sakbayeme.

Holotype: M. C. Z. 78,066. *Paratypes*: M. C. Z. 78,067, 78,068 and 78,071.

GOODRICHIA TROCHIFORMIS PILSBRYI, subsp. nov.

Plate 1, figs. 5-6

Similar to *G. trochiformis* in its general character, differing from that species in being narrower, and of a lighter color.

This is only tentatively placed as a subspecies; additional material may indicate that it is of specific standing.

Measurements of Shell

Length	Width	Ap. Length	Ap. Width	
26	18.5	14	9.5 mm.	Holotype
27	18.5	14.5	10	Paratype
25.5	16	13.5	9	"
25	16	13	8.5	"
21	16	12	8.5	"

Holotype: M. C. Z. 78,073. *Paratypes*: 45,009; Sakbayeme.

Length measurements here only consider the present length of the shell, as 4 or 5 mm. have been lost through corrosion.

G. C. Spence (Journ. conch., 18, no. 7, p. 215) has described and figured *Potadoma nyongensis*, a species which has the general appearance of a *Goodrichia*. Its strongly developed marginal carinae, more or less flaring aperture and quite distinctive shape seem to place it here rather than under *Potadoma* proper. Though *Goodrichia* has been separated from *Potadoma* in part upon the exceedingly long radula, shell characters as well are quite different from that genus.

RHINOMELANIA v. Mart.

Pilsbry and Bequaert (op. cit., p. 248) tentatively placed this genus in the Potadominae. A single specimen only is contained in the collection made by Schwab. Nothing additional can be added to the relative position of this genus, as the specimen considered here is without operculum or any soft parts. Specifically, it seems to be quite different from *Rhinomelania zenkeri* v. Mart.

Genoholotype: *Rhinomelania zenkeri*.

RHINOMELANIA AFRICANA, sp. nov.

Text fig. 1

Shell: imperforate, not carinate, rather globose, slightly shouldered. Color dark reddish brown. Whorls 3½ (remaining) regularly increasing

in size, rounded, the last shouldered, increasingly toward the aperture. Early whorls corroded away; a complete shell would probably have five or six whorls. Aperture rather oblong, its long axis forming an angle of about 45% with the axial line. Palatal lip simple, thin. Parietal lip very slightly thickened. Columella nearly straight. Sutures well defined. Sculpture of very fine cross striae. Body whorl slightly mal-leated. Canal angled with the axial line.

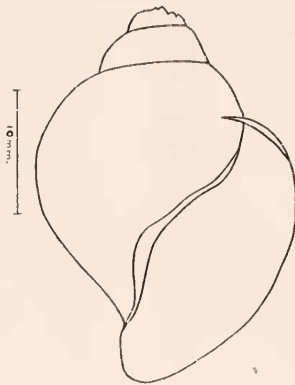


FIG. 1. *Rhinomelania africana* Clench. Holotype.

Length 30, width 20, ap. length 20.5, ap. width 11 mm.

The length given here does not include the loss of at least 4 mm. through corrosive action. The aperture length includes the canal as well.

Holotype: M. C. Z. 15,794. Kribi.

The species differs from *R. zeukeri* by having rounded and not flattened whorls. The canal is decidedly angled towards the axial line and not straight and continuous with the columella, as it is in *zeukeri*. *R. africana* is smaller than *zeukeri* though their proportional measurements are about the same.

AMPULLARIIDAE

LANISTES (LANISTES) SANAGAENSIS, sp. nov.

Plate 1, figs. 7-8

Shell: sinistral perforate, rather solid, though not thick or heavy in structure. Color dark yellowish brown, faintly banded by dark brown along superior border of body whorl (holotype). Four well-marked

brownish bands on another specimen (juvenile). Whorls strongly shouldered, the shouldered area flat and at 90° with the axial line. The edge of the shoulder marked by a very slight elevated ridge. Spire not greatly produced, badly corroded. Aperture ovate. Palatal lip thin, simple. Parietal lip only thinly calloused. Columella thin. Sutures well marked and formed at almost right angles by the whorls and shoulders. Sculpture of rather prominent growth lines interposed with very fine axial hair lines. No spiral sculpture.

Measurements of Shell

Length	Width	Ap. Length	Ap. Width	
40.5	41	31	19.5 mm.	Holotype
28	29	20.5	14	Paratype

There is a probable loss of some 5 mm. in length due to the corroded spires.

Holotype: M. C. Z. 78,064. *Paratype*: 78,065; Sanaga River, near Sakbayeme.

This species of *Lanistes* seems to be quite different from any heretofore-described species from West Central Africa. It is a member of the carinate group, the carinae here reduced to a single but well-developed shoulder ridge. It is larger and more depressed than *L. libycus* (More), and from *L. subcarinata* Sby. by possessing a single rather than double or more carinae. In general shape it is similar to *L. congicus* Btg. as figured by Pilsbry and Bequaert (loc. cit., pl. 18, fig. 12), but differs in its larger size, different banding and in lacking entirely the spiral sculpture of that species.

DONACIDAE

EGERIA PARADOXA HERMAPHRODITA (Gmel.).

1791 *Venus hermaphrodita* Gmelin, Syst. nat., 13th ed., 1 (6), 3278

1927 *Egeria paradoxa hermaphrodita* Gmelin, Pilsbry and Bequaert, Bull. Am. mus. nat. hist., 53 (2), 368.

Several specimens of this species were obtained in the Sanaga River at Lobetal "just beyond tide water." This locality is approximately twenty-five miles up stream from the coast.

The periostracum of young specimens is light brownish yellow in coloration, turning to dark brown in the adults. Radial lines may or may not be present. These vary in width from fine thread-like lines to stripes increasing in width towards the margins of the valves. When

present, there is no regularity as to spacing and they vary in number on both valves of the same specimen. These radial stripes are purplish in color, the color is impregnated into the prismatic layer of the shell, and not in the periostracum. The stripes are covered inside of the valves by the nacreous layer and are exposed only along the margin. Muscle scars, palial line and basal areas of the cardinal teeth occasionally tinged with purple.

Measurements

Length	Height	Diameter
88	74	45 mm.
80	63	38.5

EGERIA SCHWABI, sp. nov.

Plate 1, figs. 1-2

Shell: triangular, thin and smooth, two faint rays running from the umbones to the margin on the posterior half. Periostracum greenish yellow, thin but firm and inclined to scale off. Superficial coloring of periostracum olivaceous green due to the purplish coloration of the shell beneath. Beaks high, nearly central and directed posteriorly. Nepeonic shell very well defined, and colored dark purplish brown. Hinge plate strongly developed, supporting a bifid median cardinal tooth on the right valve, as well as a small accessory lateral tooth on the posterior margin. The left valve possesses two well-developed diverging cardinals with a narrow, thinly formed intermediate tooth. The right valve possesses a single, short, flat conic lateral tooth. Beak cavities deep.

Measurements

Length	Height	Diameter
41	33	24 mm.

Holotype: M. C. Z. 78,072; Lobetal, lower Sanaga River.

E. schwabi differs particularly from other species of the genus by its thinness. There is only a slight internal thickening in the form of a broad flat ridge that extends from the anterior side of the beak cavity. This broadens and thins out entirely at the margin.

In outline it approaches *E. paradoxa hermaphrodita*, but differs from that species in its much darker color, its thinness and much smaller hinge plate area. The purplish coloration of the interior is impregnated

in the prismatic layer of the shell, the mottled appearance due to slight and uneven deposits of the inner layer of shelly material. This purplish coloration is also responsible for the olivaceous appearance of the brownish yellow periostracum.

MUTELIDAE

MUTELINAE

ASPATHARIA SINUATA (E. v. Martens)

1883 *Spatha sinuata* E. v. Martens, Sitz. Bev. Ges. Naturf. Fr. Berlin, p. 73; 1885, Conchol. Mitth., 2 (5-6), p. 190, pl. 34, figs. 5-6.

1927 *Aspatharia sinuata* (E. v. Martens), Pilsbry and Bequaert, Bull. Am. mus. nat. hist., 53 (Art. II), p. 417, pl. 35, figs. 1-4, pl. 36, figs. 1-3a.

Muge River, north of Sakbayeme (tributary of the Man River, which is a tributary of the Sanaga River).

A series of five specimens which agree in all details with the description of this species by Pilsbry and Bequaert (1927, op. cit.); no details of beak sculpture were obtainable as the umbonal areas were badly corroded. Measurements for three of the five that were obtained alive are here given.

Length	Height	Diameter
72	33.5	26 mm.
65	31	22.5
65	32	24